

February 2017 Climate Review for Puerto Rico and U.S. Virgin Islands.

Synopsis: *Below normal rainfall was observed across the local area except across Saint Thomas and the western interior of Puerto Rico. Warm to hot temperatures were also observed. There is a chance to observe near or above normal rainfall June through August.*

Summary

A seasonable and fair weather pattern prevailed across the islands during most of the month. There were, however, a couple of noticeable weather features that affected the region. Between the February 2nd and February 5th time period, surges of level moisture produced persistent rounds of diurnally and locally induced showers across the western half of Puerto Rico. The afternoon and evening of February 4 produced the most significant rainfall of the period to the point that significant flooding was observed in the coastal municipality of Hatillo, where over 4 inches of rain was observed. The other noticeable weather feature occurred between February 19 and 22 with the passage of an upper-level trough. This feature produced more widespread shower activity across the islands; however, rainfall amounts during the time period were not significant as average amounts across the majority of the region were below half an inch. Based on the Cooperative Observer Network Data (COOP), a 57 % of the normal rainfall was observed across PR. Preliminarily, an average rainfall total of 1.47 inches was measured, which is 1.13 below normal (Table 1). Across St. Thomas/St. John and St. Croix, an average rainfall total of 118 and 70 inches was observed, respectively. In terms of temperature, the mean temperature for PR was 75.6°F, which is approximately 2.3°F warmer than the 30-year average from the National Centers for Environmental Information (NCEI).

At the primary climatological data sites, a rainfall total of 0.81 and 1.70 inches was observed at Henry E. Rohlsen Airport in Saint Croix (TISX) and Cyril E King Airport in St Thomas (TIST), respectively. In terms of temperature, the mean temperature at TISX and TIST was 77.8 and 78.3°F, which is 0.4 and 0.5°F below normal, respectively. Across the San Juan Area, February 2017 ended as the 3rd warmest February on record in nearly 117 years of record.

The average streamflow from the U.S. Geological Survey (U.S.G.S.) river gauge network indicates most

of the streamflows across the western half of Puerto Rico are running in the normal range. Across the eastern half of Puerto Rico most of the streamflows are running below the 24th percentile which is below or well below normal. Most of them are located across the Carraizo and La Plata basins. As a result, the U.S. Drought Monitor classified the southern coast and the eastern third of Puerto Rico as D0 or abnormally dry.

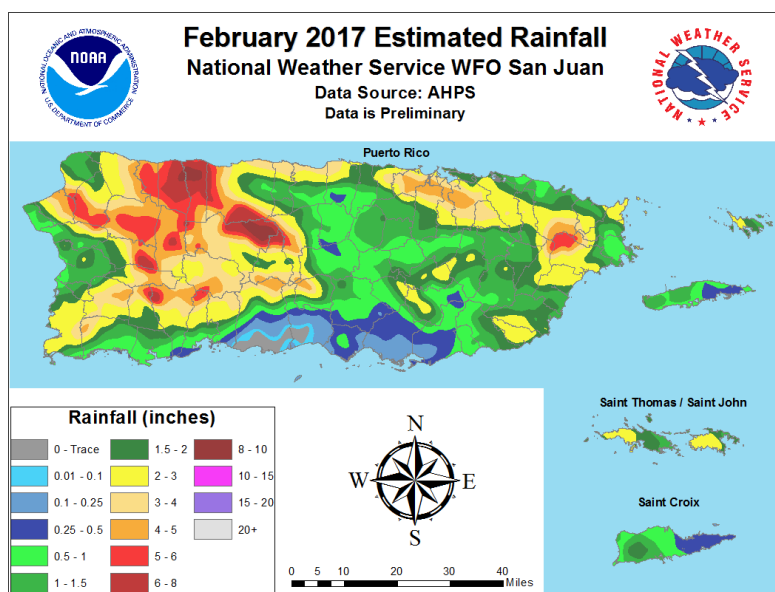
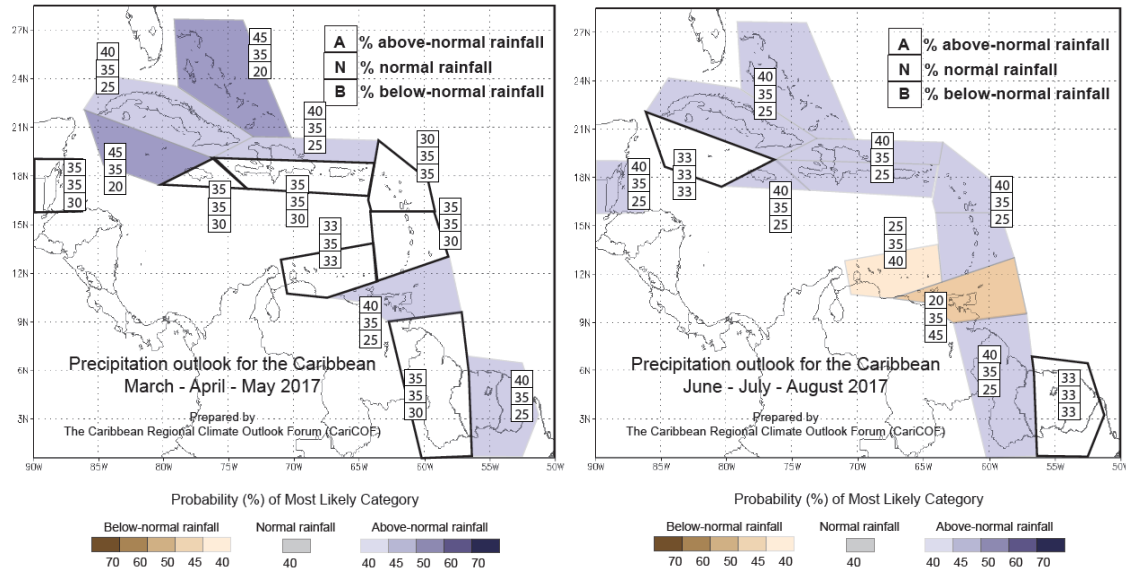


Figure 1. Rainfall Totals based on

Looking Ahead



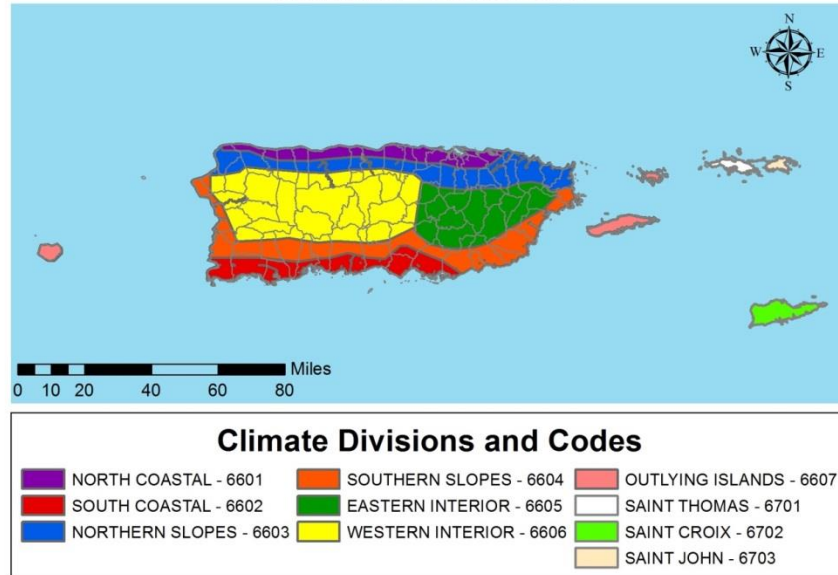
Typically, the dry season continues across the local islands through the end of March with a transition during April and the onset of the wet season on May. ENSO conditions are currently neutral with no impact on Caribbean rainfall expected. However, with a possible El Niño on forecast by JJA, there are somewhat increased chances for drier than usual conditions in the southern Caribbean. Warm Sea Surface Temperatures (SSTs) in the NW Caribbean may lead to above-average humidity and atmospheric instability going out of the dry season, which tilts the odds towards a wetter first half of the wet season. With SSTs remaining above average throughout the regions, air temperatures, especially at night, are also expected to be warmer than average.

As a result, there is a chance to observe near or above normal rainfall June through August.

More Info: <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

Average Rainfall Accumulation per climate zones based on COOP

Puerto Rico and U.S. Virgin Islands Climate Divisions



	North Coastal	South Coastal	Northern Slopes	Southern Slopes	Eastern Interior	Western Interior	All PR	St Thomas / St John	St Croix
Observed (February)	1.97	0.28	1.89	0.40	1.77	2.46	1.47	2.01	1.13
Normal (February)	2.96	1.45	3.03	1.86	3.92	2.36	2.60	1.71	1.61
% PON (February)	67	19	62	22	45	104	57	118	70
Accumulated YTD	5.85	7.03	7.11	1.79	5.95	7.13	5.86	3.42	3.59
Normal accumulation YTD	7.02	3.07	7.23	3.86	8.61	5.77	5.93	4.43	3.61
% PON accumulated YTD	83	229	98	46	69	124	99	77	99

Table 1. February 2017 and Year to date (YTD) Rainfall (inches). Percent of Normal (PON).

Historical Rainfall and Temperature

	Puerto Rico		San Juan Area		IST		ISX	
1	1983	0.69"	1941	0.05"	1987	0.42"	2005	0.11"
2	1941	0.92"	1902	0.09"	1993	0.47"	1983	0.18"
3	1977	0.96"	1983	0.20"	2010	0.52"	1986	0.30"

Table 2. Driest Februarys

	Puerto Rico		San Juan Area		IST		ISX	
1	1950	7.63"	1950	7.90"	2015	13.35"	1995	4.23"
2	1954	5.43"	1918	7.84"	1954	3.96"	1988	3.59"
3	1995	4.90"	1954	7.34"	1956	3.79"	1956	3.54"

Table 3. Wettest Februarys

	Puerto Rico**		San Juan Area		IST		ISX	
1	2010	75.9 °F	2010	80.0 °F	1994	81.2 °F	1994	80.2 °F
2	2015	75.1 °F	1983	79.9 °F	1995	80.9 °F	1998	79.9 °F
3	1947	75.1 °F	2017	79.6 °F	1993	80.5 °F	1988	79.5 °F

Table 4. Warmest Februarys °F

	Puerto Rico**		San Juan Area		IST		ISX	
1	1941	66.2 °F	1951	73.3 °F	1956	75.8 °F	2012	74.8 °F
2	1940	67.5 °F	1917	73.3 °F	1999	76.2 °F	1956	76.0 °F
3	1943	68.0 °F	1925	73.4 °F	1955	76.2 °F	1999	76.4 °F

Table 5. Coolest Februarys

	Puerto Rico	San Juan Area	IST	ISX
Temperature	73.3 °F	77.9 °F	78.8 °F	78.2 °F
Rainfall	2.66"	2.39"	1.43"	1.65"

Table 6. Normal Values for February

Monthly and Seasonal Highlights for Primary Climatological Data Sites.

	Jan	Feb	Season (DJF, 2016-2017)
San Juan Area	5 th warmest	3 rd warmest	3 rd warmest
IST	---		
ISX	---		

Table 7. Winter 2016-2017

Additional Highlights Based on COOP Data

Wettest Days

Station	Inches (inches)	Date
COLOSO	1.95	2/3/2017
ARECIBO OBSY	1.64	2/5/2017
JAHOME ALTO	1.00	2/14/2017

Highest Maximum Temperatures

Station	Temperature (°F)	Date
PONCE 4 E	92	2/13/2017
AGUIRRE	91	2/23/2017
GUAYAMA 2E	90	2/27/2017

Lowest Minimum Temperatures

Station	Temperature (°F)	Date
PONCE 4 E	55	2/21/2017
MARICAO 2 SSW	58	2/22/2017
AIBONITO 1 S	58	2/25/2017

Data is preliminary and has not undergone final quality control by the National Centers for Environmental Information / NCEI/. Therefore, this data is subject to revision. Report based on data received until March 5th 2017.

Puerto Rico Climate Record Period: 1940 to 2017

San Juan Metro Area Climate Record Period: 1898 to 2017 (Primary climatological site)

Cyril E. King Airport/St Thomas Climate Record Period: 1953 to 2017 (Primary climatological site)

Henry E. Rohlsen Airport/St Croix Climate Record Period: 1951 to 2017 (Primary climatological site)